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which may serve for the speedy reduction of the observations during the next six weeks, and likewise assist in finding the comet.

Berlin Mean Noon	True Right Ascension of Comet.	True Declination of Comet.	Log. Dist. from Earth.	Time for Aberration.
1844.	h m s	° ′ ″		m s
Nov. 8	1 34 4·5	+ 5 47 49	9·66758	−3 51·17
10	1 35 15·5	6 13 13	9·68354	3 59·83
12	1 36 30·0	6 37 57	9·69946	4 8·78
14	1 37 47·9	7 2 3	9·71532	4 18·03
16	1 39 9·3	7 25 34	9·73110	4 27·58
18	1 40 34·4	7 48 33	9·74680	4 37·43
20	1 42 3·4	8 11 1	9·76240	4 47·58
22	1 43 36·1	8 33 1	9·77788	4 58·02
24	1 45 12·5	8 54 35	9·79323	5 8·74
26	1 46 52·6	9 15 45	9·80845	5 19·75
28	1 48 36·5	9 36 33	9·82354	5 31·05
30	1 50 23·9	9 56 59	9·83848	5 42·64
Dec. 2	1 52 15·0	10 17 6	9·85328	5 54·52
4	1 54 9·5	10 36 54	9·86793	6 6·68
6	1 56 7·5	10 56 25	9·88242	6 19·12
8	1 58 9·2	11 15 41	9·89675	6 31·84
10	2 0 14·3	11 34 42	9·91092	6 44·84
12	2 2 22·6	11 53 28	9·92493	6 58·11
14	2 4 34·4	12 12 1	9·93877	7 11·65
16	2 6 49·4	12 30 23	9·95243	7 25·44
18	2 9 7·6	12 48 32	9·96591	7 39·48
20	2 11 28·7	+13 6 28	9·97922	−7 53·78

"The following constants are adapted to this ellipse, and may be used for further calculation,

$$x = [0{\cdot}4813600] \sin (E + 76^\circ\ 3'\ 34'') - 1{\cdot}810161$$
$$y = [0{\cdot}3543699] \sin (E + 339\ 39\ 41) + 0{\cdot}483894$$
$$z = [0{\cdot}0292555] \sin (E + 331\ 32\ 24) + 0{\cdot}313834$$

where E is the comet's eccentric anomaly.

"It is to be remarked, that this comet is in some parts of the orbit liable to considerable perturbations from *Jupiter's* influence."

J. R. HIND.

Mr. Bishop's Observatory, Regent's Park,
November 7, 1844.

X. Observations of De Vico's Comet, made at Ashurst by R. Snow, Esq.

The observations extend from September 24 to October 7. The

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right ascensions and declinations of the comet are given as deduced from the instrumental readings without any correction. In some instances, when the comet was immediately compared with a star, the position of the star is similarly given. On October 2, the instrumental right ascension and declination of *θ Ceti* are also given; but, in general, the corrected positions of the comet cannot be determined till the stars of comparison have been observed on the meridian, and their positions furnished.

XI. Observations of Altitude and Azimuth of the Great Comet of 1843, made at St. Helena. By G. Brand, Esq.

The observations were made with an altitude and azimuth instrument by Gilbert, and they extend from March 6 to March 23. On March 6, the comet was compared with the moon only; on every other day, the altitudes and azimuths of some of the fundamental stars were observed. The length of the tail is stated to be, on March 6, 42° 55′; on March 7, 37° 23′; and, on March 17, 32° 47′. It is stated also, that on March 8, the colour of the tail had changed, and become more like the rays of the moon: on the 15th it appeared to be much brighter.

XII. Extract from the Translation of a Letter from Professor Bessel, dated Konigsberg, 10th of August, 1844. On the Variations of the Proper Motions of *Procyon* and *Sirius*. Communicated by Sir J. F. W. Herschel.

The subject which I wish to communicate to you, seems to me so important for the whole of practical astronomy, that I think it worthy of having your attention directed to it. I find, namely, that existing observations entitle us without hesitation to affirm that the proper motions, of *Procyon* in declination, and of *Sirius* in right ascension, are not constant; but, on the contrary, that they have, since the year 1755, been very sensibly altered. If this be so, the observations of the place of a star at two epochs are no longer sufficient to express its place for any indefinite time; but, for this purpose, it is necessary to investigate the law of the change. It follows also from this, that we are yet very far off from the correctness we imagined ourselves to have arrived at in the fundamental determinations of astronomy; and, that a new problem presents itself, whose solution will cost much labour and a long period of time, viz. the problem of determining the special motions of a star. For, even if a change of the motion can, up to the present time, be proved only in *two* cases, yet will all other cases be rendered thereby liable to *suspicion;* and it will be equally difficult, by observations, to free other proper motions from the suspicion of change, and to get such a knowledge of the change as to admit of its amount being calculated.

The earliest suspicion of the want of constancy of the proper motion was derived about the year 1834, from the corrections of the clock-time, which, at this observatory, were registered with every observed culmination of a fixed star and its reduction to the

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